

## Case Report

# Giant Relapse Sigmoid Volvulus: Case Report

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**Abstract**

Sigmoid volvulus is one of the acute abdomen that requires endoscopic intervention and/or surgery. High recurrence rates after detorsion require patients to be operated under elective conditions. A 32 year old mental retarded male patient was operated for recurrent sigmoid volvulus. In this study, we aimed to present a giant recurrent sigmoid volvulus case accompanied by diaphragmatic hernia.

**Keywords**

volvulus; sigmoid; hernia

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## Introduction:

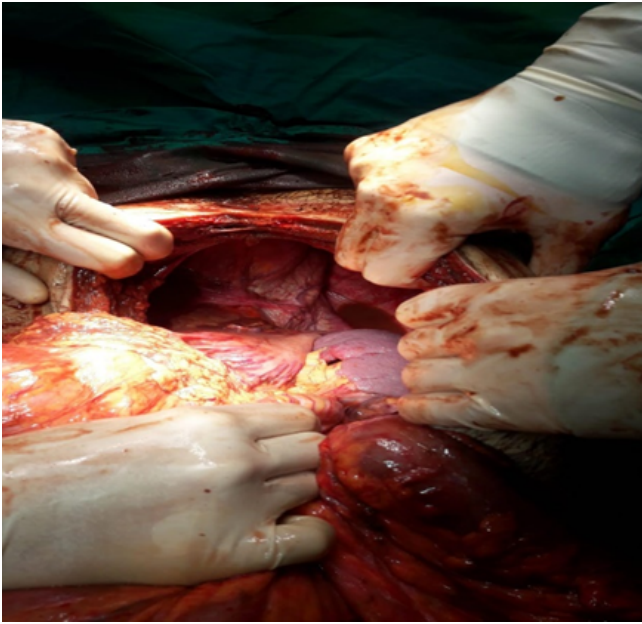
Sigmoid colon is the most mobile part of the gastrointestinal tract due to the mesentery length of the sigmoid colon. Intestinal volvulus (90%) is a more common evidence compared to other intestinal segments as a result of its revolving around mesenteric structures. Different procedures have been defined to prevent recurrence after detorsion [1]. One of the most effective methods of these procedures is segmental bowel resection. In emergency conditions, anastomosis or Hartmann colostomy should be decided after segmented resection according to the current condition of the patient [2]. In our study, we aimed to present a 32-year-old patient who was operated due to a recurrent giant sigmoid volvulus.

## 1. Case

32 year old male and mental retarded patient applied to the emergency service with the complaint of swelling and constipation in her abdomen for 5 days. It was learned that the patient had a previous hospitalization due to sigmoid volvulus and a bowel operation due to ileus. Her physical examination

revealed no audible left lung sounds, swelling in both scrotums, excessive distention in the abdomen, and peritoneal irritation. Routine laboratory examination showed that Wbc: 41.880/uL Hgb: 11.4 g/dl arterial blood gas parameters Lactate: 5.3 mmol/L. Verbal interpretation of intravenous (IV) contrast computed tomography was found to be compatible with sigmoid volvulus. Later, the patient was given an informed consent from his family members and a laparotomy was decided.

Diagnostic laparotomy was applied to the patient. After exploration it was observed that the sigmoid colon extended from the left thoracic cavity to the pelvis (Fig. 1). It was seen that the sigmoid colon was perforated in 2 places and its wall was necrotic and its diameter reached approximately 20 cm (Fig. 2). Sigmoid colon was taken out of the abdomen and segmented bowel resection and Hartmann procedure were performed. Small intestine segments were found to be herniated from the left inguinal canal and the small intestines were returned to the abdomen. Left inguinal hernia was repaired from a separate skin incision. During the operation, the patient's blood pressure was 50/40 mmHg, so



**Figure 1.** Intraoperative diaphragmatic hernia.



**Figure 2.** Dilated and perforated sigmoid colon.

the right scrotum could not be intervened and the operation was terminated. The patient was taken to the surgical intensive care unit in the postoperative period, and appropriate antibiotherapy was started. The patient, who was extubated on the postoperative 6<sup>th</sup> day, was taken to the surgical service. Afterwards, the patient, whose tolerance of oral intake progressed, was discharged on the 15<sup>th</sup> postoperative day.

## 2. Discussion and Conclusion

Colon volvulus is the third leading cause of colon obstruction in the world following colorectal cancer and complicated sigmoid diverticulitis [2].

It is more common in men and the elderly [3, 4]. In the etiology, factors such as long sigmoid colon and narrow-bottomed sigmoid mesocolon existence, diet, colon motility disorder, Chagas disease and scleroderma play a role [5, 6].

Spontaneous detortion of the sigmoid volvulus is not common [7]. Patients generally tend to have hypovolemic and endotoxic shock due to closed-loop obstruction and gangrene [8, 9].

In sigmoid volvulus cases, it is reported that detortion with endoscopic intervention is successful in 76-89% of cases, and 50% of caecal volvulus cases develop 21-57% again [10]. Therefore, surgical intervention in elective conditions is recommended for all patients who have successful endoscopic detortion. If endoscopic detorsion fails or if there are signs of peritonitis, surgery should be performed without waiting. If there is gangrene or peritonitis, Hartmann procedure is applied [11]. In our patient, endoscopic detortion was not considered due to both relapse of the volvulus and acute abdominal signs in the patient. End colostomy was performed with sigmoid resection.

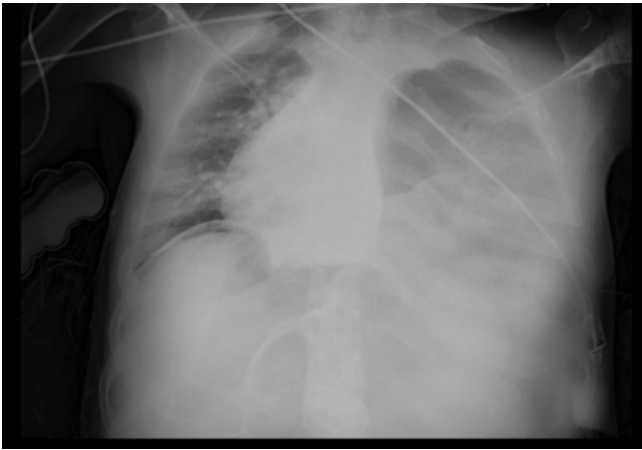
In this case, we think that sigmoid volvulus caused the accompanying mental retardation, chronic constipation, diaphragmatic hernia and previous abdominal operation to reach much larger than expected.

Abdominal contamination due to perforation explains the preoperative septic table of the patient. Because of diaphragmatic hernia, it was thought that the left lung was collapsed in the chronic process. The chest radiograph of the patient, taken at our institution about 6 years ago, showed that there was no pathology in the left lung (Fig. 3). In his application, it was seen that the left lung was completely collapsed (Fig.4). It was decided to terminate the operation to evaluate the right scrotal swelling in the elective conditions due to the patient's septic table and prolonged anesthesia.

In our patient, colonic anastomosis was not



**Figure 3.** 2013 X-ray image.



**Figure 4.** 2019 X-ray image.

found suitable because of the findings of peritoneal irritation and the diameter of the sigmoid colon reached very large dimensions.

Bilateral scrotal swelling diaphragmatic hernia coexistence of giant recurrent sigmoid volvulus is our case report.

Surgical treatment methods applied in emergency conditions result in high morbidity and mortality rates (12-53%) due to the advanced age of patients, presence of comorbid factors, general condition disorder, and inability to perform preoperative bowel cleansing [12]. When surgical treatment performed under emergency conditions and surgical methods performed under elective conditions after colonoscopic decompression are compared, it is seen that there is a significant difference in morbidity and mortality [12, 13].

The most effective method of preventing recurrence in the treatment of sigmoid volvulus is colon resection to be applied to the volvulus segment. The necessity of primary anastomosis or Hartmann's procedure, which can be applied after resection, may vary depending on the general condition of the patients and the presence of perforation.

Elective operation options should be evaluated for each patient in detorted volvulus, and the probability of mortality and morbidity in recurrent volvulus cases should not be forgotten.

### Informed Consent

Written informed consent was obtained from the patient who participated in this case.

### Conflict of Interest

The authors stated no conflict of interest.

### Financial Disclosure

The authors declared no financial support.

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